

Epstein Barr Virus in Patients with Nephropathy Associated with Systemic Lupus Erythematosus, Pilot Study in Egyptian Patients

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Systemic lupus erythematosus (SLE) is an autoimmune disease affecting young age adults especially females. Infection with Epstein Barr virus (EBV) represents a common pathogen associated with SLE activity. This study investigates the occurrence of EBV in SLE patients with renal complications by serological markers and molecular detection of EBV genome in renal biopsies and examine the association of EBV with the pathological grades in renal diseases. The study included nineteen patients with systemic lupus nephropathy and thirteen patients with non-lupus nephropathy. Renal biopsies were subjected to detection of EBV by PCR. Serum autoantibodies (anti- dsDNA, anti-Sm and anti-RNP) and EBV-IgM and IgG antibodies were detected by ELISA. The commonest autoantibody was anti- dsDNA (73.7%) followed by anti-Sm (57.8%) and anti-RNP (31.6%). The EBV-PCR revealed that 31.6% of patients with lupus nephropathy showed positive LMP1 gene expression in renal biopsies. On the other hand, serological markers for EBV showed no significant difference between both groups; IgM for EBV was positive in 26.3% of patients with lupus nephropathy and 7.7% in non-lupus nephropathy, while IgG was positive in 26.3% and 15.4 % respectively. Positive LMPI-PCR was demonstrated in all (3/3) patients with severe degree of nephropathy as compared to 23.1% of patients with moderate degree of nephropathy. A significant association was found between EBV-PCR and anti-Sm, ($P=0.01$), anti- dsDNA ($P=0.001$), and IgG for EBV and anti- dsDNA ($P=0.03$). In conclusion, Molecular detection of EBV DNA in renal biopsies can be applied for laboratory diagnosis in SLE nephropathy. The severity of nephropathy associated with SLE seems to be aggravated by the presence of EBV. Further extended studies are required to elucidate this association.